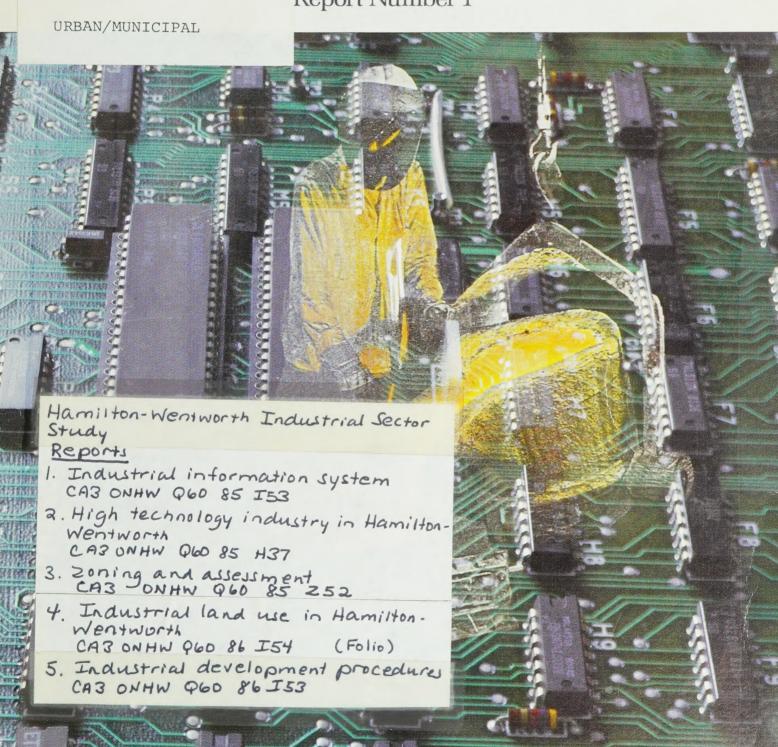
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GOVERNMENT DOCUMENTS

Industrial Information System

Hamilton-Wentworth Industrial Sector Study

Report Number 1





THE INDUSTRIAL INFORMATION SYSTEM HAMILTON-WENTWORTH INDUSTRIAL SECTOR STUDY REPORT NO. 1

SUMMARY

This report documents the organization and contents of the Hamilton-Wentworth Industrial Information System. The System provides accurate comprehensive information about industrial properties, buildings, and establishments in the Region.

Although the file structure is complex, it can be easily updated and direct query access will be available in late 1985.

The major applications of the system are policy analysis, support for industrial marketing, and monitoring of industrial development. It will form the basis for much of the analysis in the Industrial Sector Study.



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1.0 INTRODUCTION

The purpose of this report is to provide an introduction to and technical description of the industrial information system. The system is a computerized data base of information about industrial properties, buildings, and establishments in Hamilton-Wentworth. It has been developed as part of a long-term study of the industrial sector of the Hamilton-Wentworth economy.

The system is comprehensive and easily updated and contains industrial information, including building, servicing, and planning status data not previously available for analysis.

The report describes the organization of the computer files that make up the industrial information system, the contents of those files, the principal sources of information, updating procedures, and applications.

2.0 ORGANIZATION

The industrial information system currently consists of six computer files on Hamilton-Wentworth's VS 90 computer. It also includes access to industrial information in two other large files.

A computer file can be thought of in terms of a matrix of rows and columns. The columns are normally called fields and the rows are called records. The files in the industrial information system have a combined total of approximately 80 fields and 41,000 records.

The files are:

1. BUILDING, which contains floor area data on industrial buildings;

2. PLANINFO, which contains planning status information for all properties with an industrial Regional Official Plan designation, Area Official Plan designation, or zoning;

3. PLANNING, which contains a variety of assessment-based information on

industrial properties and establishments;

4. SERVICED, which contains servicing status information for industrial properties;

5. EXPANSE, which contains census tracts and industrial property sales

between June 1980 and December 1983; and,

6. SICRISC, which contains 1984 Standard Industrial Classification (SIC) and Regional Information Systems Committee (RISC) codes that update the 1982 Employment Survey. Employment data for industrial establishments can be obtained from the 1982 Employment Survey.

Recent industrial real estate transactions can be obtained from the TEELA file. Industrial employment by location can be obtained from the 1982 Employment Survey.

Appendix 1 is a series of tables that outline the fields in these files and provide basic technical information. All of the files are indexed and can be cross-referenced by part or all of the assessment roll number.

The structure of the industrial information system will evolve over time with experience and as data sources change. The files could be consolidated if Hamilton-Wentworth were to acquire more sophisticated data management software.



Table 1

CONTENTS OF THE INDUSTRIAL INFORMATION SYSTEM

A. Basic Property Information

- o Assessment Roll Number
- o Area Municipality
- o Property Address
- o Legal Description
- o Owner's Name o Name Type
- Occupancy Status
- o Property Area
- o Frontage
- o Water Service
- o Sanitary Sewer Service
- o Storm Sewer Service
- o Number of Buildings
- o Number of Establishments

B. Building Information

- o Building Identifier
- o Total Floor Area
- o Ground Floor Area
- o Original Floor Area o Year of Construction
- o Floor Area of Additions
- o Year of Additions
- o Special Building Uses
- o Number of Establishments
 - per Building
- o Demolition Indicator

C. Establishment Information

- o Establishment Identifier
- o Establishment Name
- o Name Type
- o Occupancy Status
- o Establishment Floor Area
- o Special Establishment Uses

D. Codes

- o Industrial Area Identifier
- o Census Tract
- o Planning Unit Code
- o Standard Industrial Classification
- (S. I.C.)
- o Regional Information Systems Committee
- (R.I.S.C.
- o Physical Land Use Code
- o Unit Class Code

E. Planning Status Information

- o Predominant Regional Official Plan Designation
- o Percentage of Property with Predominant Regional Official Plan Designation
- o Industrial Regional Official Plan Designation
- o Percentage of Property with Industrial Regional Official Plan Designation
- o Precominant Area Official Plan Designation
- o Percentage of Property with Predominant Area Official Plan Designation
- o Industrial Area Official Plan Designation
- o Percentage of Property with Industrial Area Official Plan Designation
- o Predominant Zoning
- o Percentage of Property with Predominant Zoning
- o First Industrial Zoning
- o Percentage of Property with First Industrial Zoning
- o Second Industrial Zoning
- Percentage of Property with Second Industrial Zoning
- o Third Industrial Zoning
- o Percentage of Property with Third Industrial Zoning

F. Economic Information

- o Realty Tax Class
- o Realty Assessment
- o Business Tax Class
- o Business Tax Percentage
- o Business Assessment
- Total Assessment
- o Selling Price
- o Date of Salel
- Total Full-Time Employment²
- o Male Full-Time Employment
- o Female Full-Time Employment²
 o Total Part-Time Employment²
- c Male Part-Time Employment2
- o Female Part-Time Employment²
- Total Seasonal Employment2
- o Male Seasonal Employment²
- o Female Seasonal Employment²

- Information on industrial real estate sales after January 1, 1984 is available in the TEELA file, which is not part of the industrial information system.
- Employment information by location was obtained from the Planning and Development Department's 1982 Employment Survey. The Department's 1985 Employment Survey will provide employment data for industrial firms in the top 100 employers according to the 1982 Survey.



The BUILDING file also contains several fields that indicate whether specific values in associated fields are estimates (See Appendix). For example, one field indicates whether establishment floor area was estimated. Individual buildings can contain more than one establishment. The number of establishments per building field identifies the number of establishments in each building, according to assessment records.

3.3 Establishment Information

The establishment identifier enables the identification of individual establishments in buildings with more than one establishment.

The establishment name fields contain up to six names and associated addresses recorded for each tenancy. Each establishment level record also contains name type and occupancy status fields.

The establishment floor area gives the total floor area occupied by each establishment. The establishment floor areas in a building sum to the total floor area of the building.

The special establishment uses field identifies non-industrial establishment within industrial buildings. These are primarily residential uses.

3.4 Codes

The industrial information system contains a number of codes that permit aggregation of the data for analytical purposes.

The industrial area identifier field assigns codes to properties in the Industrial-Business Parks designated in the Hamilton-Wentworth Official Plan and other significant industrial areas in the Region. The field is left blank for properties outside defined industrial areas.

Census tracts from the 1981 census were coded for all properties in the system. The census tract coding can be combined with map coordinate information supplied by Statistics Canada to perform computerized mapping.

The planning unit code is a four-digit code that identifies both the neighbourhood and planning division in which a property is located. Planning divisions are groupings of neighbourhoods.

The Standard Industrial Classification (SIC) is a classification of economic activities developed by Statistics Canada and revised periodically. The industrial information system includes SIC codes assigned during the Planning and Development Department's 1982 employment survey. It also contains revisions for 1984 that include new establishments.

The Regional Information Systems Committee (RISC) has developed a coding system that classifies properties according to land use activity. RISC codes from the 1982 employment survey and 1984 revisions are included in the industrial information system.

The physical land-use code is a property-level coding system maintained annually by the Department as part of the planning data system. The updating procedure captures all new properties, properties with changed assessment roll numbers, deleted assessment roll numbers, and properties where the land use has changed as a result of building construction.

The unit class code is a code assigned by the assessor to indicate the type of establishment. For example, a unit class code of IND means industrial; a unit class code of VCI indicates a vacant commercial or industrial building. Unit class codes can apply to portions of a property as well as to establishments.

3.5 Planning Status Information

The predominant Regional Official Plan designation field contains the Regional Official Plan designation occupying the greatest percentage of the property. The percentage of property with predominant Regional Official Plan designation field specifies the applicable percentage in cases where it is less than 100.

The industrial Regional Official Plan designation field contains the industrial designation in the Regional Official Plan if any part of the property is in an Industrial-Business Park. The percentage of property with industrial Regional Official Plan designation field specifies the percentage in cases where it is less than 100.

The predominant Area Official Plan designation, the percentage of property with predominant Area Official Plan designation, the industrial Area Official Plan designation, and the percentage of property with industrial area Official Plan designation fields contain similar information at the area municipal level.

The predominant zoning field records the predominant zoning on the property. It includes a code for properties affected by development control under the Niagara Escarpment Plan. Properties can have multiple zonings. The first industrial zoning, second industrial zoning, and third industrial zoning fields record up to three different industrial zonings on a single property. The percentage of property in each of these zoning fields is recorded in separate fields.

3.6 Economic Information

The industrial information system incorporates access to employment data from Hamilton-Wentworth's 1982 Employment Survey. The employment data is disaggregated by type and sex: total full-time employment, male full-time employment, female full-time employment, total part-time employment, male part-time employment, female part-time employment, total seasonal employment, male seasonal employment, and female seasonal employment.

The industrial information system also contains some assessment and tax information. The realty tax class is a single digit code indicating the rate of tax liability or grants-in-lieu on realty assessment. For example, a C code indicates that the property is taxable at the full commercial rate. The business tax class field is a single digit code intended to assist in the calculation of taxes or grants-in-lieu applicable to business assessment. Four values are possible: "B" indicates taxable at full commercial rates; "P" indicates exempt government agencies, Ontario Hydro, and public utilities paying a grant at full commercial rates in lieu of business taxes; "G" indicates exempt government agencies paying a grant at the general commercial rate (no school rates); and a blank entry indicates that no business is present.



The realty assessment field contains the dollar amount of assessment for the property. The business tax percentage field defines the rate at which business tax is calculated on the realty assessment. The business assessment field contains the dollar amount of assessment applicable to the business according to the following formula:

Business Assessment = Realty Assessment X Business Tax Percentage.

The total assessment field is the sum of the realty and business assessments for each property.

Hamilton-Wentworth has subscribed to TEELA's computerized real estate transaction service since January 1984. Information concerning sales of industrial property can be extracted from this file as required. The industrial information system also contains selling price and date of sale information for industrial sales between June 1980 and December 1983. These data were computerized from the paper records the Region subscribed to prior to 1984.

4.0 SOURCES OF INFORMATION

The data in the industrial information system have been drawn from a variety of sources.

Most of the basic property information is from the Planning and Development Department's planning data system. The planning data system is based on the annual assessment computer tapes provided by the Provincial Assessment Office. The data on tape are enhanced by Planning staff to include property area, planning unit, physical land use code, and zoning (in Hamilton only). The PLANNING file in the industrial information system is an extract from the planning data system consisting of records corresponding to: (1) all roll numbers in the BUILDING file; (2) all roll numbers in the PLANINFO file; (3) all roll numbers for which the physical land use code is greater than or equal to 70 and less than 80 (the industrial range of codes); (4) all roll numbers for which the unit class code = IND.

The building information was taken from paper assessment files maintained by individual assessors. Building identifiers were assigned during the collection of data from the paper assessment files. The accuracy of the floor area data declines as the age of the building increases.

The names of establishments were obtained from the planning data system. The last four digits of the assessment roll number were used as establishment identifiers. Establishment floor area information was taken from the paper assessment files. Unit class codes, which are assessment-based establishment level codes, were obtained from the planning data system.

Data on the servicing of industrial properties were collected and computerized as part of the infrastructure inventory carried out by the Planning and Development Department in 1984.

Planning status information was obtained directly from the relevant land use planning documents.

Employment data and 1982 SIC and RISC codes were obtained from the 1982 Employment Survey. A limited update of SIC and RISC codes for new firms and firms with physical land use code or name changes was carried out in 1984.



Industrial area identifiers and census tracts were assigned by Planning staff.

Assessment and tax class information were obtained from the planning data system.

5.0 UPDATING

Different updating procedures are required for each of the files in the industrial information system.

The building data will be updated approximately quarterly. The Hamilton Building Department provides a monthly computerized list of building permits issued. Similar manual lists are currently provided to the Economic Development Department by the other area municipalities. The list of permits issued can be checked against log books in the Assessment Office to determine whether or not construction has been completed. If it has, then the required floor area data can be obtained from the appropriate paper assessment file and entered into the BUILDING file. However, this process does not capture changes in establishment floor areas that are independent of changes in building area.

The planning status information file will also be updated quarterly to include amendments to the Regional Official Plan, Area Official Plan, and Zoning By-Laws.

The assessment-based information file will be updated annually as a follow-up to the update of the planning data system. Census tracts and S.I.C. and R.I.S.C. codes will be updated at the same time.

Servicing data will be updated when the infrastructure inventory is updated. The intervals for updating the infrastructure inventory have not yet been determined.

The 1982 Employment Survey will not be updated, since it was designed as a point-in-time survey. However, supplementary employment data from subsequent surveys may be added to the information system.

The TEELA file is updated monthly as real estate transactions are received from TEELA.

6.0 APPLICATIONS

The industrial information system has three major applications:

- o policy analysis;
- o marketing support; and,
- o monitoring.

Accurate and relevant information is a critical element in the quality of government decisions affecting the industrial sector of the regional economy, particularly in a complex, rapidly changing, and uncertain environment significantly influenced by external economic events.

The industrial information system provides the basis for the economic and land use analysis required for the development of industrial strategy and policy recommendations in the Industrial Sector Study. It also provides staff with the capability to respond more effectively to Council requests for analysis of specific industrial policy issues.

Analysis of industrial data is presently carried out using SAS (Statistical Analysis System), a very powerful statistical software package on the City of Toronto's computer.

The second major application of the industrial information system involves supporting the marketing and industrial relation efforts of the Economic Development Department by providing information typically requested by developers, relocating firms, and existing firms. This support function will take two forms - direct query access and batch processing of requests.

Direct query access will allow the Economic Development Department direct computerized access to key data in the information system through a terminal connected to the Wang VS 90 computer. Access to basic property data, servicing status, land use planning status, building data, and realty assessment information will be provided. The main advantage of direct query access is that it allows extremely quick responses to inquiries without requiring any knowledge of the structure of the information system or any of its files. This is possible because of a recently acquired software product called SPEED, which allows inquiry screens to be constructed from multiple source files. Direct query access will make it possible for the Economic Development Department to provide real estate brokers, developers, and prospective clients with a variety of industrial data. Direct query access is expected to be operating in the Fall of 1985.

More complicated requests requiring manipulation of data rather than simple queries can be processed using the Wang data management utilities or SAS. For example, one real estate broker requested a list of vacant, zoned, fully serviced industrial properties in Hamilton between 1.5 and 8.0 acres in size and outside the Mountain Industrial-Business Park for a client considering a new location in Hamilton-Wentworth.

The industrial information system also provides monitoring capability because of its updating features. Reports on subjects such as industrial construction, changes in industrial establishments, and the supply of various types of industrial land can be produced as needed.



APPENDIX

INDUSTRIAL INFORMATION SYSTEM

DESCRIPTION OF FILES

INTERPRETATION OF APPENDIX

- 1. The information under each file name specifies whether the records are fixed or variable length, the length of each record, whether the file is indexed or consecutive, the name of the primary key, and the names of any alternate keys.
- 2. The Field Name is the name of the field in the control file in Hamilton-Wentworth's VS90 computer. The control file is a master file required to organize and define the contents of any file processed with the Wang Data Management Utilities.
- 3. Start Position means the byte number in the record at which the field begins.
- 4. Internal Format indicates how the computer stores the information on disk. The codes used are:

C = Character

U = Unsigned

Z = Zoned Decimal

P = Packed

- 5. Internal Length means the number of bytes allocated to store the information in each field. It varies depending on the amount of information and the internal format selected.
- 6. External Length means the number of bytes used when the field is represented externally by the DATENTRY utility (software that allows data input).
- 7. The Description provides more information about the contents of the field.

FILE NAME: BUILDING RECORDS ARE FIXED-LENGTH, RECORD SIZE IS 81 FILE ORGANIZATION IS INDEXED, WITH KEY FIELD = IDNUM ALTERNATE PATH IS: MUNROLL

Field Name	Start Position	Internal Format	Internal Length	External Length	Description
IDNUM	1	С	25	25	ID Number (Primary Key)
MUN	1	U	2	2	Municipality Code
MUNROLL	1	U	13	13	Provincial Assess- ment Roll No. Excluding ESTID
ROLLNUM	3	U	11	11	Provincial Assessment Roll No. Excluding MUN and ESTID
ESTID	14	U	4	4	Establishment Identifier
BLDID	18	Z	3	4	Building Identifier
DATADD	21	С	4	4	Year of Building Addition
DEMOID	25	С	1	1	Demolition Indicator
ESTFLA	26	Р	4	8	Establishment Floor Area
ESTFLEST	30	С	1	1	Establishment Floor Area Estimated
ADDFLA	31	Р	4	8	Floor Area of Additions or Demolitions
GRDFLA	35	Р	4	8	Ground Floor Area
TOTFLA	39	Р	4	8	Total Floor Area

Field Name	Start Position	Internal Format	Internal Length	External Length	Description
ORIGFLA	43	Р	4	8	Original Floor Area
ORIGDATE	47	С	4	4	Year of Original Construction
DATEST	51	С	1	1	Year of Original Construction Estimated
BLDTOTAL	52	Р	2	4	Total Number of Buildings
ESTOTAL	54	Р	2	4	Total Number of Establishments
SPESTUSE	56	С	1	1	Special Establishment Use
SPBLDUSE	57	С	2	2	Special Building Use
UPDATE	59	С	4	4	Year of Last Revision to Assessment File
ESTBLD	63	Р	2	4	Establishments Per Building



FILE NAME: PLANINFO
RECORDS ARE FIXED-LENGTH, RECORD SIZE IS 74
FILE ORGANIZATION IS INDEXED, WITH KEY FIELD = MUNROLL

Field Name	Start Position	Internal Format	Internal Length	External Length	Description
MUN	1	С	2	2	
MUNROLL	1	С	13	13	
ROLLNUM	3	С	11	11	
PREDAOP	14	С	3	3	Predominant AOP Designation
PREDAOP%	17	C ·	2	2	Percent of Property With Predominant AOP Design
PREDZON	19	С	8	8	Predominant Zoning
PREDZON%	27	С	2	2	Percent of Property With Predominant Zoning
INDAOP	29	С	3	3	Industrial AOP Designation
INDAOP%	32	С	2	2	Percent of Property With Industrial AOP Designation
INDZON	34	С	8	8	Industrial Zoning
INDZON%	42	С	2	2	Percent of Property With First Industrial Zoning
INDZON2	44	С	8	8	Secondary Industrial Zoning
INDZON2%	52	С	2	2	Percent of Property With Secondary Industrial Zoning

Field Name	Start Position	Internal Format	Internal Length	External Length	Description
INDZON3	54	С	6	6	Tertiary Industrial Zoning
INDZON3%	60	С	2	2	Percent of Property With Tertiary Industrial Zoning
PREDROP	62	С	3	3	Predominant ROP Designation
PREDROP%	65	С	2	2	Percent of Property With Predominant ROP Designation
INDROP	67	С .	3	3	Industrial ROP Designation
INDROP%	70	С	2	2	Percent of Property With Industrial ROP Designation
INDAIDEN	72	С	3	3	Industrial Area Identifier

FILE NAME: PLANNING
RECORDS ARE VARIABLE-LENGTH, MAXIMUM RECORD SIZE IS 300
FILE ORGANIZATION IS INDEXED, WITH KEY FIELD = ROLLEST

Field Name	Start Position	Internal Format	Internal Length	External Length	Description
MUN	7	С	2	2	Municipality Code
MUNROLL	1	С	13	13	Provincial Assess- ment Roll Number Excluding ESTID
ROLLEST	1	С	17	17	Provincial Assess- ment Roll Number Including ESTID
ROLLNUM	3	С	11	11	Roll Number Excluding MUN and ESTID
ESTID	14	С	4	4	Establishment Identifier
ADDRESS	18	С	28	28	Property Address
STNUM	18	U	4	4	Street Number
STNAME	22	С	19	19	Street Name
STMISC	41	С	5	5	Miscellaneous Street Data
SHRTDESC -	46	С	29	29	Legal Description
NAMEADD1	75	С	28	28	Name 1
OCCSTAT1	103	С	1	1	Occupancy Status 1
NAMTYPE1	104	С	1	1	Name Type 1
NAMEADD2	105	С	28	28	Name 2
OCCSTAT2	133	С	1	1	Occupancy Status 2
NAMTYPE2	134	С	1	1	Name Type 2

Field Name	Start Position	Internal Format	Internal Length	External Length	Description
NAMEADD3	135	С	28	28	Name 3
OCCSTAT3	163	С	1	1	Occupancy Status 3
NAMTYPE3	164	С	1	1	Name Type 3
NAMEADD4	165	С	28	28	Name 4
OCCSTAT4	193	С	1	1	Occupancy Status 4
NAMTYPE4	194	С	1	1	Name Type 4
NAMEADD5	195	С	28	28	Name 5
NAMEADD6	223	C .	28	28	Name 6
PROPAREA	251	Р	5	10	Property Area
FRONTAGE	256	Р	7	14	Property Frontage
LUC	263	U	2	2	Physical Land Use Code
PUC	265	U	4	4	Planning Unit Code
UCC	269	บ	4	4	Unit Class Code
REALASS	273	Р	5	10	Realty Assessment
TOTREASS	278	Р	5	10	Total Assessment
BUSASS	283	Р	5	10	Business Assessment
RETAXCL	288	С	1	1	Realty Tax Class
BUSTAXCL	289	С	1	1	Business Tax Class
BUSPERC	290	U	3	3	Business Tax Percentage

NOTE: The six NAMEADD fields frequently contain address information as well as owners' names. Owners' names are listed first, followed by address if space is available. A single name can require more than one of the NAMEADD fields (e.g., Regional Municipality of Hamilton-Wentworth).

FILE NAME: SERVICED

RECORDS ARE VARIABLE-LENGTH, MAXIMUM RECORD SIZE IS 65
FILE ORGANIZATION IS CONSECUTIVE

Field Name	Start Position	Internal Format	Internal Length	External Length	Description
MUN	1	С	2	2	Municipality Code
PUC	3	U	4	4	Planning Unit Code
STNAME	7	С	19	19	Street Name
STNUM	26	U	4	4	Street Number
STMISC	30	С	5	5	Miscellaneous Street Data
ROLLNUM	35	С	11	11	Roll Number Excluding MUN
SAN	46	С	1	1	Sanitary Sewer
STM	47	С	1	1	Storm Sewer
WTR	48	С	1	1	Water
MUNROLL	49	С	13	13	Provincial Assessment Roll Number
COUNT	62	U	4	4	Sequence Number

FILE NAME: EXPANSE
RECORDS ARE VARIABLE-LENGTH, MAXIMUM RECORD SIZE IS 72
FILE ORGANIZATION IS INDEXED, WITH KEY FIELD = MUNROLL

Field Name	Start Position	Internal Format	Internal Length	External Length	Description
MUN	1	С	2	2	Municipality Code
MUNROLL	1	С	13	13	Provincial Assess- ment Roll Number Excluding ESTID
ROLLEST	1	С	17	17	Provincial Assess- ment Roll Number
ROLLNUM	3	С	11	11	Roll Number Excluding MUN and ESTID
ESTID	14	С	4	4	Establishment Identifier
CENSUS	18	U	6	6	Census Tract
REGDATE1	24	С	8	8	Registration Date of Sale #1
SELPRIC1	32	U	8	8	Selling Price #1
REGDATE2	40	С	8	8	Registration Date of Sale #2
SELPRIC2	. 48	U	8	8	Selling Price #2
REGDATE3	56	С	8	8	Registration Date of Sale #3
SELPRIC3	64	U	8	8	Selling Price #3

FILE NAME: SICRISC
RECORDS ARE VARIABLE-LENGTH, MAXIMUM RECORD SIZE IS 23
FILE ORGANIZATION IS INDEXED, WITH KEY FIELD = ROLLEST

Field Name	Start Position	Internal Format	Internal Length	External Length	Description
MUN	1	U	2	2	Municipality Code
ROLLEST	1	С	17	17	Provincial Assess- ment Roll Number
ROLLNUM	3	U	11	11	Roll Number Excluding MUN and ESTID
ESTID	14	U	4	4	Establishment Identifier
SIC	18	С	3	3	Standard Industrial Classification
RISC	21	С	3	3	Regional In- formation Systems Committee Code



